

AMENDMENTS IN THE CLAIMS:

1. (Currently Amended) A tracking control apparatus in an optical disc apparatus for performing reproduction for an optical disc capable of reproduction-only and performing recording/reproduction for an optical disc capable of recording/reproduction, comprising:

focusing means for forming an optical beam spot on a recording surface of an optical disc by focusing light beam on the recording surface of the optical disc;

moving means for moving the optical beam spot in a radial direction of the recording surface of the optical disc;

photodetection means having a light receiving surface for detecting light reflected off the optical disc, in which the light receiving surface is separated into a plurality of areas, and each of the plurality of areas is formed to generate a received light quantity signal in accordance with a received light quantity and to output the received light quantity signal;

a filter section including a plurality of low-pass filters, in which each of the plurality of low-pass filters removes a component having a frequency equal to or higher than a predetermined cutoff frequency from a corresponding received light quantity signal among a plurality of the received light quantity signals output from the photodetection means;

a switching section for selectively outputting one of a plurality of signals output from the low-pass filters and a plurality of signals output from the plurality of areas of the photodetection means;

a tracking error detection section for generating a tracking error signal indicating an amount of deviation of the optical beam spot from a track to be scanned on the recording surface of the optical disc by performing a predetermined calculation with respect to a the plurality of signals output from the filter section the switching section; and

a tracking control section for driving the moving means such that the optical beam spot follows the track on the recording surface of the optical disc in accordance with the tracking error signal.;

wherein the switching section provides the signals output from the photodetection means to the tracking error detection section when an optical disc inserted into the optical disc apparatus is the optical disc capable of reproduction-only, and provides the signals output from the filter section to the tracking error detection section when an optical disc inserted into the optical disc apparatus is the optical disc capable of recording/reproduction.

2. (Currently Amended) A tracking control apparatus according to claim 1, further comprising a band control section for controlling the filter section such that the predetermined cutoff frequency becomes small as a recording speed for recording information on the optical disc increases. wherein the optical disc capable of reproduction-only is a DVD (Digital Versatile Disc)-ROM and/or a finalized DVD-R and/or a finalized DVD+R and/or a finalized DVD-RW and/or a finalized DVD+RW and/or a BD (Blu-ray Disc)-ROM and/or a HDDVD (High Definition DVD)-ROM.

3.-6. (Cancelled).

7. (Currently Amended) A tracking control method performing tracking control by using a tracking control apparatus included in an optical disc apparatus for performing reproduction for an optical disc capable of reproduction-only and performing recording/reproduction for an optical disc capable of recording/reproduction, wherein the tracking control apparatus includes:

focusing means for forming an optical beam spot on a recording surface of an optical disc by focusing light beam on the recording surface of the optical disc,

moving means for moving the optical beam spot in a radial direction of the recording surface of the optical disc; and

photodetection means having a light receiving surface for detecting light reflected off the optical disc, in which the light receiving surface is separated into a plurality of areas, and each of the plurality of areas is formed to generate a received

light quantity signal in accordance with a received light quantity and to output the received light quantity signal, the tracking control method comprising the steps of:

using a filter section including a plurality of low-pass filters to remove a component having a frequency equal to or higher than a predetermined cutoff frequency from each of a plurality of the received light quantity signals output from the photodetection means;

generating a tracking error signal indicating an amount of deviation of the optical beam spot from a track to be scanned on the recording surface of the optical disc by performing a predetermined calculation with respect to a plurality of signals output from the filter section the photodetection means when an optical disc inserted into the optical disc apparatus is the optical disc capable of reproduction-only; and

generating a tracking error signal indicating an amount of deviation of the optical beam spot from a track to be scanned on the recording surface of the optical disc by performing a predetermined calculation with respect to a plurality of signals output from the filter section when an optical disc inserted into the optical disc apparatus is the optical disc capable of recording/reproduction; and

driving the moving means such that the optical beam spot follows the track on the recording surface of the optical disc in accordance with the tracking error signal.

8.-12. (Cancelled).

13. (Currently Amended) A signal processing apparatus used in a tracking control apparatus included in an optical disc apparatus for performing reproduction for an optical disc capable of reproduction-only and performing recording/reproduction for an optical disc capable of recording/reproduction, wherein

the tracking control apparatus includes:

focusing means for forming an optical beam spot on a recording surface of an optical disc by focusing light beam on the recording surface of the optical disc;

moving means for moving the optical beam spot in a radial

direction of the recording surface of the optical disc; and

photodetection means having a light receiving surface for detecting light reflected off the optical disc, in which the light receiving surface is separated into a plurality of areas, and each of the plurality of areas is formed to generate a received light quantity signal in accordance with a received light quantity and to output the received light quantity signal, the signal processing apparatus comprising:

a filter section including a plurality of low-pass filters, in which each of the plurality of low-pass filters removes a component having a frequency equal to or higher than a predetermined cutoff frequency from a corresponding received light quantity signal among a plurality of the received light quantity signals output from the photodetection means;

a switching section for selectively outputting one of a plurality of signals output from the low-pass filters and a plurality of signals output from the plurality of areas of the photodetection means;

a tracking error detection section for generating a tracking error signal indicating an amount of deviation of the optical beam spot from a track to be scanned on the recording surface of the optical disc by performing a predetermined calculation with respect to a the plurality of signals output from the filter section the switching section; and

a tracking control section for driving the moving means such that the optical beam spot follows the track on the recording surface of the optical disc in accordance with the tracking error signal;

wherein the switching section provides the signals output from the photodetection means to the tracking error detection section when an optical disc inserted into the optical disc apparatus is the optical disc capable of reproduction-only, and provides the signals output from the filter section to the tracking error detection section when an optical disc inserted into the optical disc apparatus is the optical disc capable of recording/reproduction.

14.-18 (Cancelled).